TOSHIBA CIC2780

FIG. 1

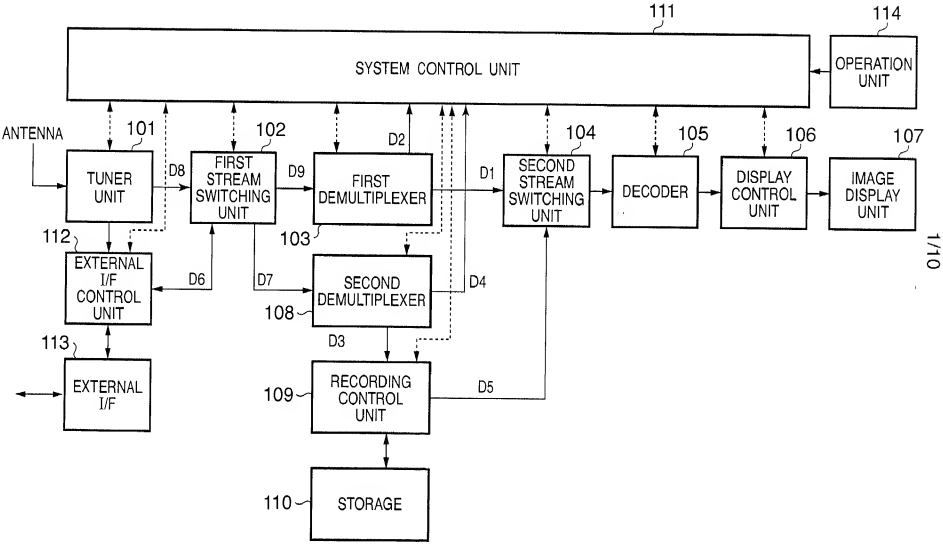

FIG. 2

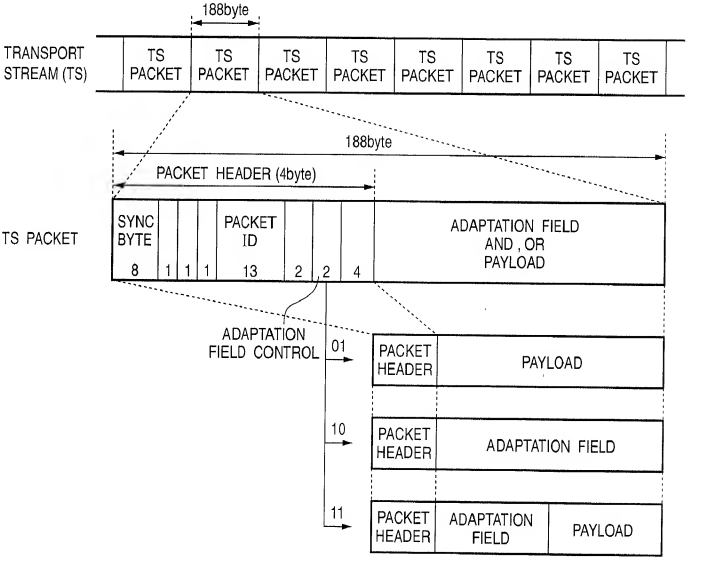
188byte
TRANSPORT STREAM (TS)
TS PACKET
TS PACKET
TS PACKET
TS PACKET
TS PACKET
TS PACKET
TS PACKET
TS PACKET
188byte
PACKET HEADER (4byte)
TS PACKET
SYNC BYTE
PACKET ID
ADAPTATION FIELD AND / OR PAYLOAD
8
1
1
1
13
2
2
4
ADAPTATION FIELD CONTROL
01
10
11
PACKET HEADER
PAYLOAD
PACKET HEADER
ADAPTATION FIELD
PACKET HEADER
ADAPTATION FIELD
PAYLOAD

FIG. 3

TABLE NAME	PID VALUE	EXPLANATION OF TABLE
PAT	0x0000	LINKING BETWEEN PROGRAM NUMBERS, PMTS, AND PIDS
PMT	DESIGNATED BY PAT	DESIGNATION OF PIDS OF PACKETS CONSTITUTING PROGRAM
NIT	0x0010	PHYSICAL NETWORK PARAMETERS; LIST OF BROADCAST SERVICES IN NETWORK
CAT	0x0001	LINKING BETWEEN PIDS AND PACKETS FOR SENDING INFORMATION SUCH AS SUBSCRIPTION INFORMATION IN PAY BROADCAST

FIG. 4

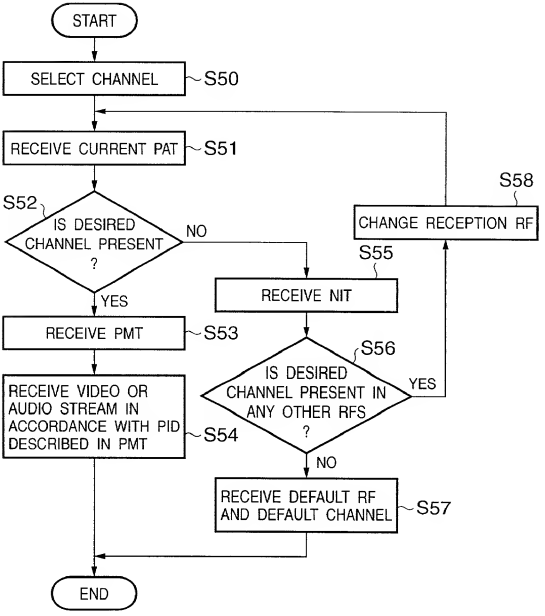
START
SELECT CHANNEL
S50
RECEIVE CURRENT PAT
S51
S52
IS DESIRED CHANNEL PRESENT ?
NO
YES
RECEIVE PMT
S53
RECEIVE VIDEO OR AUDIO STREAM IN ACCORDANCE WITH PID DESCRIBED IN PMT
S54
END
S58
CHANGE RECEPTION RF
S55
RECEIVE NIT
S56
IS DESIRED CHANNEL PRESENT IN ANY OTHER RFS ?
YES
NO
RECEIVE DEFAULT RF AND DEFAULT CHANNEL
S57

FIG. 5

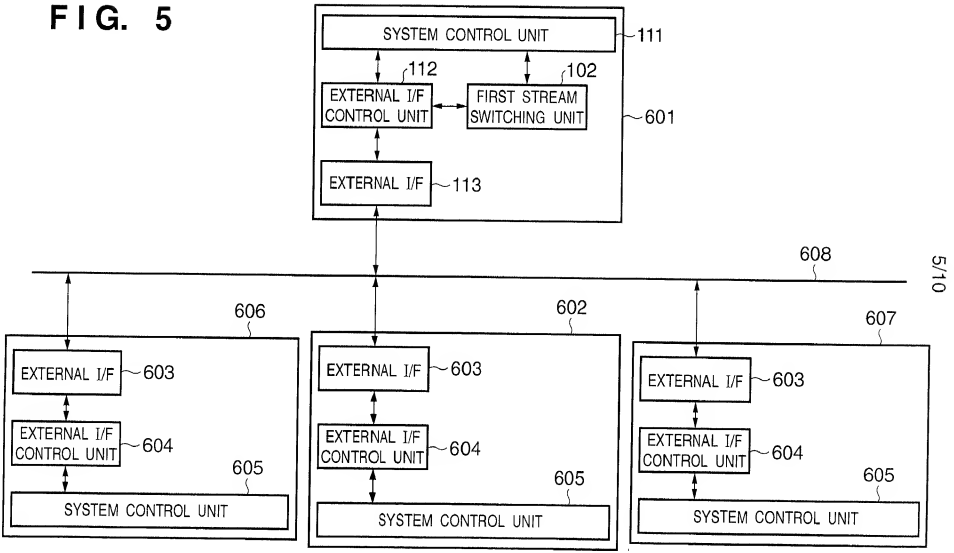
SYSTEM CONTROL UNIT
111
112
102
EXTERNAL I/F CONTROL UNIT
FIRST STREAM SWITCHING UNIT
601
EXTERNAL I/F
113
608
606
602
607
EXTERNAL I/F
603
EXTERNAL I/F CONTROL UNIT
604
605
SYSTEM CONTROL UNIT

FIG. 6

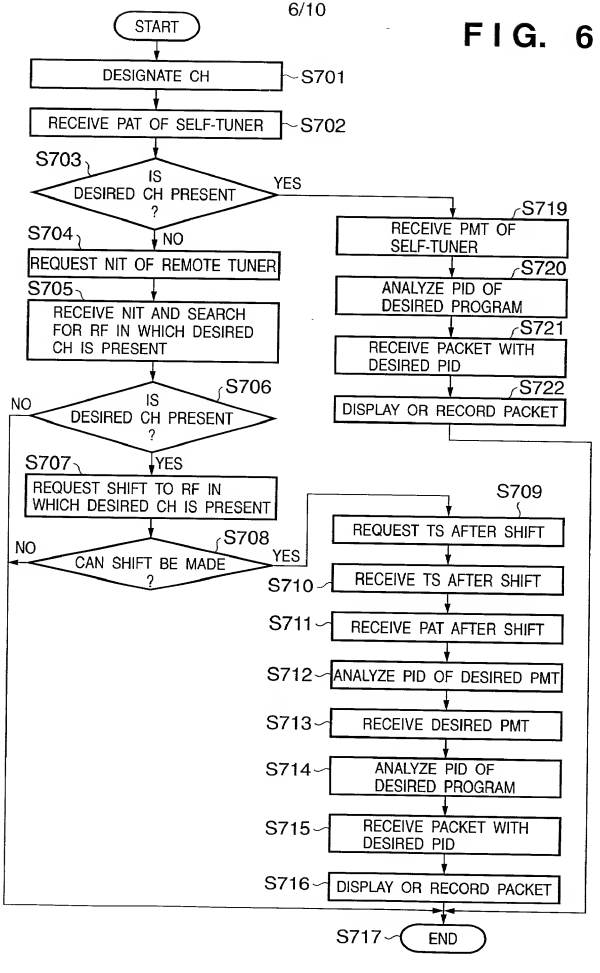

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FIG. 7

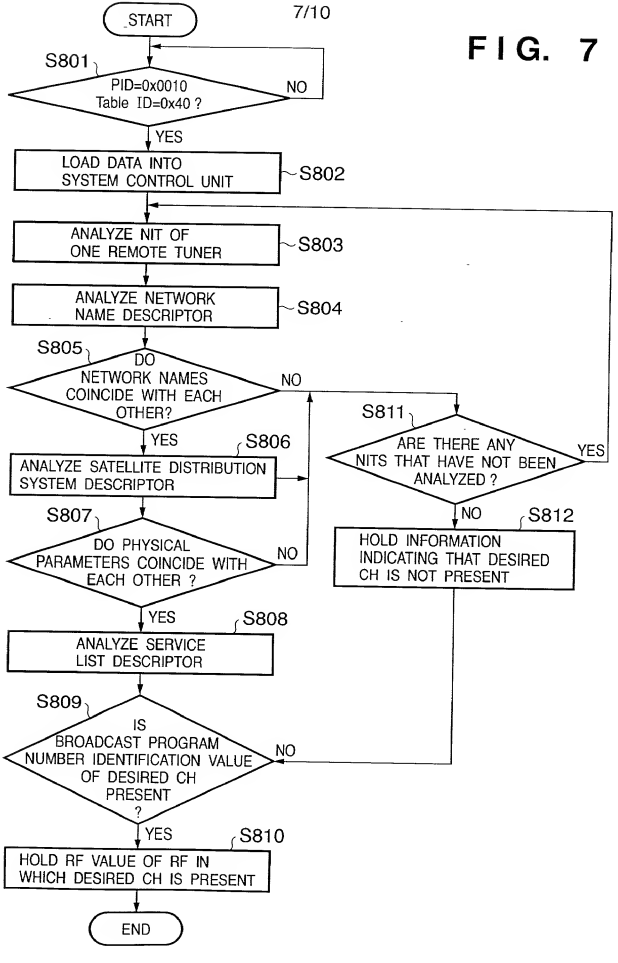

START
S801
PID=0x0010
Table ID=0x40 ?
NO
YES
LOAD DATA INTO
SYSTEM CONTROL UNIT
S802
ANALYZE NIT OF
ONE REMOTE TUNER
S803
ANALYZE NETWORK
NAME DESCRIPTOR
S804
S805
DO
NETWORK NAMES
COINCIDE WITH EACH
OTHER?
NO
YES
S806
ANALYZE SATELLITE DISTRIBUTION
SYSTEM DESCRIPTOR
S807
DO PHYSICAL
PARAMETERS COINCIDE WITH
EACH OTHER ?
NO
YES
S808
ANALYZE SERVICE
LIST DESCRIPTOR
S809
IS
BROADCAST PROGRAM
NUMBER IDENTIFICATION VALUE
OF DESIRED CH
PRESENT
?
NO
YES
S810
HOLD RF VALUE OF RF IN
WHICH DESIRED CH IS PRESENT
END
S811
ARE THERE ANY
NITS THAT HAVE NOT BEEN
ANALYZED ?
YES
NO
S812
HOLD INFORMATION
INDICATING THAT DESIRED
CH IS NOT PRESENT

FIG. 8

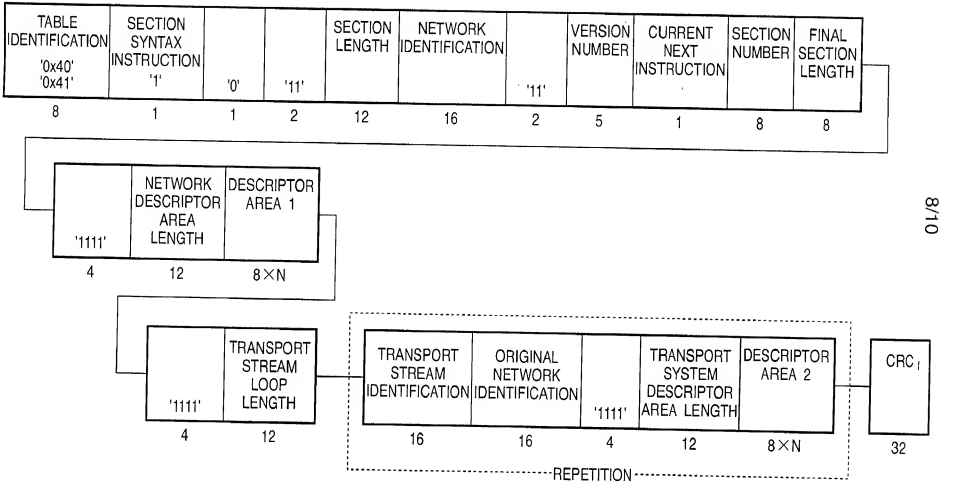


TABLE IDENTIFICATION '0x40' '0x41'
8
SECTION SYNTAX INSTRUCTION '1'
1
'0'
1
'11'
2
SECTION LENGTH
12
NETWORK IDENTIFICATION
16
'11'
2
VERSION NUMBER
5
CURRENT NEXT INSTRUCTION
1
SECTION NUMBER
8
FINAL SECTION LENGTH
8
'1111'
4
NETWORK DESCRIPTOR AREA LENGTH
12
DESCRIPTOR AREA 1
8×N
'1111'
4
TRANSPORT STREAM LOOP LENGTH
12
TRANSPORT STREAM IDENTIFICATION
16
ORIGINAL NETWORK IDENTIFICATION
16
'1111'
4
TRANSPORT SYSTEM DESCRIPTOR AREA LENGTH
12
DESCRIPTOR AREA 2
8×N
REPETITION
CRC
32

FIG. 9A

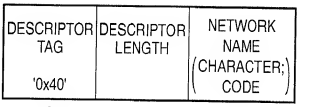


FIG. 9B

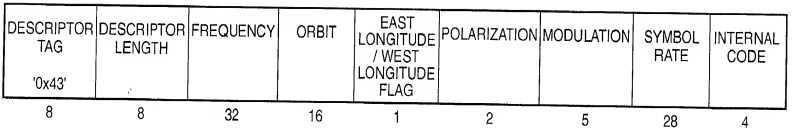


FIG. 9C

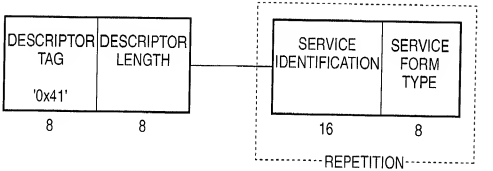
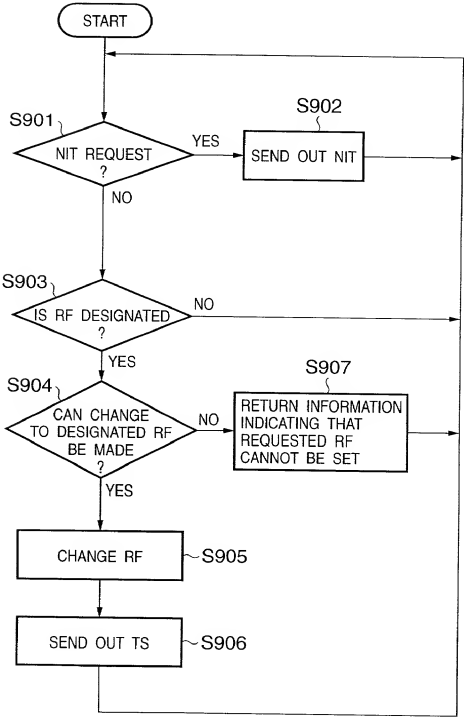


FIG. 10


START
S901
NIT REQUEST ?
YES
S902
SEND OUT NIT
NO
S903
IS RF DESIGNATED ?
NO
YES
S904
CAN CHANGE TO DESIGNATED RF BE MADE ?
NO
S907
RETURN INFORMATION INDICATING THAT REQUESTED RF CANNOT BE SET
YES
CHANGE RF
S905
SEND OUT TS
S906